

Application No.: 10/023267

Case No.: 56783US002

**Amendments to the Claims:**

The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

1. (Currently amended) A method of modifying the hydrophilicity of a porous article, said method comprising:  
providing a reaction chamber having a capacitively-coupled system comprising at least one grounded electrode and at least one electrode powered by an RF source;  
generating a plasma in the chamber thereby causing an ion sheath to form around at least one of the electrodes;  
locating a porous article in the ion sheath wherein the article pores are smaller than the mean free path of any species in the plasma; and  
treating the article by allowing reactive species from the plasma to react with the article surface and pore interiors  
whereby the hydrophilicity of the article is increased ~~changed~~ such that the bulk wetting properties of the article are improved.
2. (Canceled).
3. (Original) The method of claim 1 wherein treatment of the porous article is continuous.
4. (Original) The method of claim 1 wherein the plasma comprises silicon.
5. (Currently amended) The method of claim 1 wherein the porous article is within the ion sheath ~~proximate~~ formed around the powered electrode.
6. (Canceled).

Application No.: 10/023267

Case No.: 56783US002

7. (Currently amended) The method of claim 1 wherein a shadow mask is placed between the porous article and the plasma during treatment in order ~~used~~ to produce an article having a patterned treated area.
8. (Currently amended) The method of claim 1 wherein a shadow mask is placed between the porous article and the plasma during treatment in order ~~used~~ to produce an article having a hydrophilicity gradient.
9. (Original) The method of claim 1 wherein the partial pressures of the species in the plasma are controlled to provide the desired elemental composition for the resulting article.
10. (Original) The method of claim 1 wherein the powered electrode is a rotating drum.
11. (Original) The method of claim 10 further comprising a second rotating drum powered electrode.
12. (Original) The method of claim 1 wherein the article has two parallel major surfaces and is treated on one major surface.
13. (Original) The method of claim 12 wherein the article is also treated on its second major surface.
14. (Original) The method of claim 1 wherein the treatment comprises attaching to the article surface and pore interiors by covalently bonding two or more species selected from the group consisting of oxygen, nitrogen, silicon, carbon, hydrogen, sulfur, and combinations thereof.
15. (Original) The method of claim 14 wherein a silicon-containing film is deposited and the article is post-treated with an oxygen plasma.

Application No.: 10/023267

Case No.: 56783US002

16. (Currently amended) The method of claim 15 wherein the silicon-containing film is a diamond-like glass.
17. (Withdrawn) An article comprising  
a microporous membrane having a pore size with a lower limit of about 0.05 micrometers and an upper limit of about 1.5 micrometers, the membrane having on its surface and in its pores, a plasma-deposited composition that improves the bulk wetting properties of the article.
18. (Withdrawn) The article of claim 17 wherein the plasma-deposited composition contains silicon.
19. (Withdrawn) An article comprising  
a porous article having a patterned plasma-deposited composition that improves the bulk wetting properties of the article.
20. (Withdrawn) An article comprising  
a porous article having two major surfaces wherein one major surface has a hydrophilic plasma-deposited composition that improves the bulk wetting properties of the article, and the other major surface is hydrophobic.
21. (Withdrawn) An article comprising  
a porous article having a patterned plasma-deposited composition.
22. (Withdrawn) The article of claim 21 wherein the plasma-deposited composition is patterned in a series of circles.